

ABSTRACT

The invention relates to a method for preparing a lithium and vanadium oxide and the thus obtained products. The method comprises preparing a precursor gel by reacting hydrogen peroxide with $V_2O_5-\alpha$ in an aqueous medium in the presence of a lithium precursor and exposing the gel to a heat treatment in an oxidant atmosphere at a temperature ranging from 260°C to 10 580°C. A compound of a formula $Li_{1+\alpha}V_3O_8$, ($0.1 < \alpha < 0.25$) comprises needle-shaped grains having a bimodal distribution, wherein the length (L) of the first distribution needles ranges from 10 to 50 μm and the length (L) of the second distribution needles ranges 15 from 10 to 10 μm .